6AV2124-0MC24-0BX0

## **Data sheet**

SIMATIC HMI TP1200 Comfort Pro for support arm (expandable, round pipe) and Extension Unit, Comfort Panel, touch operation, 12" Widescreen TFT display, 16 million colors, PROFINET interface, MPI/PROFIBUS DP interface, 12 MB configuration memory, WEC 2013, configurable from WinCC Comfort V14 SP1 with HSP



General information	
Product type designation	TP1200 PRO
Display	
Design of display	TFT
Screen diagonal	12.1 in
Display width	261.1 mm
Display height	163.2 mm
Number of colors	16 777 216
Resolution (pixels)	
<ul> <li>Horizontal image resolution</li> </ul>	1 280 pixel
Vertical image resolution	800 pixel
Backlighting	
<ul> <li>MTBF backlighting (at 25 °C)</li> </ul>	80 000 h
<ul> <li>Backlight dimmable</li> </ul>	Yes; LED, dimmable
Control elements	
Keyboard fonts	
<ul> <li>Function keys</li> </ul>	
<ul> <li>Number of function keys</li> </ul>	0
<ul> <li>Number of function keys with LEDs</li> </ul>	0
<ul> <li>Keys with LED</li> </ul>	No
System keys	No
<ul> <li>Numeric keyboard</li> </ul>	Yes; Onscreen keyboard
alphanumeric keyboard	Yes; Onscreen keyboard
Touch operation	
Design as touch screen	Yes; Projective-capacitive
Expansions for operator control of the process	
<ul> <li>Direct keys (touch buttons as S7 input I/O)</li> </ul>	40
Installation type/mounting	
Mounting	Support arm
Mounting position	vertical
Mounting in portrait format possible	No
maximum permissible angle of inclination without external ventilation	35°
Supply voltage	
Type of supply voltage	DC
Rated value (DC)	24 V
permissible range, lower limit (DC)	19.2 V
permissible range, upper limit (DC)	28.8 V
Input current	

Current concumption (roted value)	1.5.A
Current consumption (rated value)	1.5 A
Starting current inrush I²t	0.5 A <sup>2</sup> ·s
Power	00 W
Active power input, typ.	36 W
Processor	
Processor type	X86
Memory	
Flash	Yes
RAM	Yes
Memory available for user data	12 Mbyte
Type of output	
Info LED	No
Power LED	No
Error LED	No
Acoustics	
Buzzer	No
Speaker	Yes
Time of day	
Clock	
Hardware clock (real-time)	Yes
Software clock	Yes
• retentive	Yes; Back-up duration typically 6 weeks
<ul><li>synchronizable</li></ul>	Yes
Interfaces	
Number of industrial Ethernet interfaces	2; 2 ports (switch) + independent port
Number of RS 485 interfaces	1; RS 422 / 485 combined
Number of RS 422 interfaces	0; together with RS 485
Number of RS 232 interfaces	0
Number of USB interfaces	2; USB 2.0
Number of other interfaces	0
Number of SD card slots	2
With software interfaces	No
Industrial Ethernet	
Industrial Ethernet status LED	3
<ul> <li>Number of ports of the integrated switch</li> </ul>	2
Protocols	
PROFINET	Yes
Supports protocol for PROFINET IO	Yes
IRT	Yes
PROFIBUS	Yes
EtherNet/IP	Yes
MPI	Yes
Protocols (Ethernet)	
• TCP/IP	Yes
• DHCP	Yes
• SNMP	Yes
• DCP	Yes
• LLDP	Yes
WEB characteristics	
• HTTP	Yes
• HTTPS	Yes
• HTML	Yes
• XML	Yes
• CSS	Yes
Active X	Yes
JavaScript	Yes
Java VM	No
Redundancy mode	
Media redundancy	
modia roddinality	

— MRP	Yes
Further protocols	
• CAN	No
MODBUS	Yes
Interrupts/diagnostics/status information	
Diagnoses	
Diagnostic information readable	Yes; S7 controller
EMC	163, 07 Controller
Emission of radio interference acc. to EN 55 011	
Limit class A, for use in industrial areas	Yes
Limit class A, for use in industrial areas     Limit class B, for use in residential areas	No
	NO
Degree and class of protection	IDOS
IP (at the front)	IP65
IP (rear)	IP65
NEMA (front)	V
Enclosure Type 4 at the front     Factorize Type 4 at the front	Yes
Enclosure Type 4x at the front	Yes
Standards, approvals, certificates	
CE mark	Yes
CULus Pour (Control of Tipe)	Yes
RCM (formerly C-TICK)	Yes
KC approval	No; Available soon
EAC (formerly Gost-R)	No; Available soon
Ambient conditions	
Suited for indoor use	Yes
Suited for outdoor use	No
Ambient temperature during operation	
Operation (vertical installation)	
For vertical installation, min.	0°C
For vertical installation, max.	45 °C
Operation (max. tilt angle)	
— At maximum tilt angle, min.	0 °C
— At maximum tilt angle, max.	40 °C
Ambient temperature during storage/transportation	
• min.	-20 °C
• max.	60 °C
Relative humidity	00.0/
Operation, max.	90 %; no condensation
Operating systems	Ni-
proprietary	No
pre-installed operating system	Voc. Windows Frehoddod Comment 2040
Windows CE	Yes; Windows Embedded Compact 2013
configuration / header	V
Message indicator	Yes
Alarm system (incl. buffer and acknowledgment)	Yes
Process value display (output)	Yes
Process value default (input) possible	Yes
Recipe management	Yes
Configuration software	Ma
STEP 7 Basic (TIA Portal)     STEP 7 Professional (TIA Portal)	No No
STEP 7 Professional (TIA Portal)  Win CO flouible Comment	No No
WinCC flexible Compact	No
WinCC flexible Standard	No
WinCC flexible Advanced     The Royal Control of the Control	No
WinCC Basic (TIA Portal)	No
WinCC Comfort (TIA Portal)	Yes; V14 SP1 HSP and higher
WinCC Advanced (TIA Portal)	Yes; V14 SP1 HSP and higher
WinCC Professional (TIA Portal)	Yes; V14 SP1 HSP and higher
Languages	

Online languages	
Number of online/runtime languages	32
Project languages	<u></u>
Languages per project	32
Functionality under WinCC (TIA Portal)	
Libraries	Yes
Applications/options	- 100
Web browser	Yes
<ul> <li>Pocket Word</li> </ul>	Yes
Pocket Excel	Yes
PDF Viewer	Yes
Media Player	Yes
<ul> <li>SIMATIC WinCC Sm@rtServer</li> </ul>	Yes
SIMATIC WinCC Audit	Yes
Number of Visual Basic Scripts	Yes
Task planner	
<ul> <li>time-controlled</li> </ul>	Yes
task-controlled	Yes
Message system	
<ul> <li>Number of alarm classes</li> </ul>	32
Bit messages	
<ul> <li>Number of bit messages</li> </ul>	4 000
Analog messages	
<ul> <li>Number of analog messages</li> </ul>	200
<ul> <li>S7 alarm number procedure</li> </ul>	Yes
<ul> <li>System messages HMI</li> </ul>	Yes
System event, more (SIMATIC S7, SINUMERIK,     SIMOTION	Yes
SIMOTION, )  • Number of characters per message	80
<ul> <li>Number of characters per message</li> <li>Number of process values per message</li> </ul>	8
Acknowledgment groups	Yes
Message indicator	Yes
Recipe management	100
Number of recipes	300
Data records per recipe	500
Entries per data record	1 000
Size of internal recipe memory	2 Mbyte
Recipe memory expandable	Yes
Variables	
Number of variables per device	2 048
Number of variables per screen	400
Limit values	Yes
Multiplexing	Yes
· manpioxing	
• Structures	Yes
• Structures	Yes
Structures     Arrays	Yes
<ul><li>Structures</li><li>Arrays</li><li>Images</li></ul>	Yes Yes
<ul> <li>Structures</li> <li>Arrays</li> <li>Images</li> <li>Number of configurable images</li> <li>Permanent window/default</li> <li>Global image</li> </ul>	Yes Yes  500 Yes Yes
<ul> <li>Structures</li> <li>Arrays</li> <li>Images</li> <li>Number of configurable images</li> <li>Permanent window/default</li> <li>Global image</li> <li>Pop-up images</li> </ul>	Yes Yes  500 Yes Yes Yes Yes
<ul> <li>Structures</li> <li>Arrays</li> </ul> Images <ul> <li>Number of configurable images</li> <li>Permanent window/default</li> <li>Global image</li> <li>Pop-up images</li> <li>Slide-in images</li> </ul>	Yes Yes  500 Yes Yes Yes Yes Yes
<ul> <li>Structures</li> <li>Arrays</li> <li>Images</li> <li>Number of configurable images</li> <li>Permanent window/default</li> <li>Global image</li> <li>Pop-up images</li> <li>Slide-in images</li> <li>Image selection by PLC</li> </ul>	Yes Yes 500 Yes Yes Yes Yes Yes Yes Yes
<ul> <li>Structures</li> <li>Arrays</li> <li>Images</li> <li>Number of configurable images</li> <li>Permanent window/default</li> <li>Global image</li> <li>Pop-up images</li> <li>Slide-in images</li> <li>Image selection by PLC</li> <li>Image number in the PLC</li> </ul>	Yes Yes  500 Yes Yes Yes Yes Yes
Structures Arrays  Images  Number of configurable images Permanent window/default Global image Pop-up images Slide-in images Image selection by PLC Image objects	Yes Yes  500 Yes Yes Yes Yes Yes Yes Yes Yes Yes
Structures Arrays  Images  Number of configurable images Permanent window/default Global image Pop-up images Slide-in images Image selection by PLC Image number in the PLC  Image objects Number of objects per image	Yes Yes  500 Yes
<ul> <li>Structures</li> <li>Arrays</li> <li>Images</li> <li>Number of configurable images</li> <li>Permanent window/default</li> <li>Global image</li> <li>Pop-up images</li> <li>Slide-in images</li> <li>Image selection by PLC</li> <li>Image number in the PLC</li> <li>Image objects</li> <li>Number of objects per image</li> <li>Text fields</li> </ul>	Yes Yes  500 Yes
<ul> <li>Structures</li> <li>Arrays</li> <li>Images</li> <li>Number of configurable images</li> <li>Permanent window/default</li> <li>Global image</li> <li>Pop-up images</li> <li>Slide-in images</li> <li>Image selection by PLC</li> <li>Image number in the PLC</li> <li>Image objects</li> <li>Number of objects per image</li> <li>Text fields</li> <li>I/O fields</li> </ul>	Yes Yes  500 Yes
<ul> <li>Structures</li> <li>Arrays</li> <li>Images</li> <li>Number of configurable images</li> <li>Permanent window/default</li> <li>Global image</li> <li>Pop-up images</li> <li>Slide-in images</li> <li>Image selection by PLC</li> <li>Image number in the PLC</li> <li>Image objects</li> <li>Number of objects per image</li> <li>Text fields</li> <li>I/O fields</li> <li>Graphic I/O fields (graphics list)</li> </ul>	Yes Yes  500 Yes
<ul> <li>Structures</li> <li>Arrays</li> <li>Images</li> <li>Number of configurable images</li> <li>Permanent window/default</li> <li>Global image</li> <li>Pop-up images</li> <li>Slide-in images</li> <li>Image selection by PLC</li> <li>Image number in the PLC</li> <li>Image objects</li> <li>Number of objects per image</li> <li>Text fields</li> <li>I/O fields</li> </ul>	Yes Yes  500 Yes

0.71	V.
• Switches	Yes
Buttons	Yes
Graphic display	Yes
• Icons	Yes
Geometric objects	Yes
Complex image objects	
<ul> <li>Number of complex objects per screen</li> </ul>	20
Alarm view	Yes
Trend view	Yes
User view	Yes
Status/control	Yes
<ul><li>Sm@rtClient view</li></ul>	Yes
Recipe view	Yes
<ul><li>f(x) trend view</li></ul>	Yes
<ul> <li>System diagnostics view</li> </ul>	Yes
Media Player	Yes
HTML browser	Yes
PDF display	Yes
<ul> <li>IP camera display</li> </ul>	Yes
Bar graphs	Yes
• Sliders	Yes
<ul> <li>Pointer instruments</li> </ul>	Yes
Analog/digital clock	Yes
Lists	
Number of text lists per project	500
<ul> <li>Number of entries per text list</li> </ul>	500
<ul> <li>Number of graphics lists per project</li> </ul>	500
<ul> <li>Number of entries per graphics list</li> </ul>	500
Archiving	
<ul> <li>Number of archives per device</li> </ul>	50
<ul> <li>Number of entries per archive</li> </ul>	20 000
Message archive	Yes
<ul> <li>Process value archive</li> </ul>	Yes
Archiving methods	
Sequential archive	Yes
— Short-term archive	Yes
Memory location	
Memory card	Yes
— USB memory	Yes
— Ethernet	Yes
Data storage format	
— CSV	Yes
— TXT	Yes
— RDB	Yes
Security	
Number of user groups	50
Number of user rights	32
Number of users     Number of users	50
Password export/import	Yes
SIMATIC Logon	Yes
Logging through printer	100
Alarms	Yes
Report (shift log)	Yes
	Yes
Hardcopy     Flectropic print to file	
Electronic print to file     Character pote	Yes; PDF, HTML
Character sets	
Keyboard fonts	Van
— US English	Yes
	Yes

• USB	Yes
• Ethernet	Yes
using external storage medium	Yes
Process coupling	
• S7-1200	Yes
• S7-1500	Yes
• S7-200	Yes
• S7-300/400	Yes
• LOGO!	Yes
WinAC	Yes
SINUMERIK	Yes; With SINUMERIK option package as from WinCC V15 or higher
• SIMOTION	Yes
<ul> <li>Allen Bradley (EtherNet/IP)</li> </ul>	Yes
Allen Bradley (DF1)	Yes
Mitsubishi (MC TCP/IP)	Yes
Mitsubishi (FX)	Yes
OMRON (FINS TCP)	No
OMRON (LINK/Multilink)	Yes
Modicon (Modbus TCP/IP)	Yes
Modicon (Modbus)	Yes
OPC UA Client	Yes
OPC UA Server	Yes
Service tools/configuration aids	
Backup/Restore manually	Yes
Backup/Restore automatically	Yes
<ul><li>Simulation</li></ul>	Yes
Device switchover	Yes
Peripherals/Options	
Printer	Yes
SIMATIC HMI MM memory card: Multi Media Card	Yes; Up to 128 MB
SIMATIC HMI SD memory card: Secure Digital memory card	Yes; Up to 2 GB
SIMATIC HMI CF memory card Compact Flash Card	No
USB memory	Yes
SIMATIC IPC USB Flashdrive (USB stick)	Yes; Up to 16 GB
SIMATIC HMI USB stick	Yes; Up to 8 GB
Network camera	Yes
Mechanics/material	
Enclosure material (front)	
• Plastic	No
Aluminum	Yes
Stainless steel	No
Dimensions	
Width of the housing front	313 mm
Height of housing front	226 mm; Without basic adapter
Overall depth	101 mm; Without basic adapter
Weights	
Weight (without packaging)	4.5 kg
3 (	

last modified:

10/7/2021 🖸